

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Federal-State Joint Board on
Universal Service

Forward-Looking Mechanism
for High Cost Support for
Non-Rural LECS

CC Docket No. 96-45

CC Docket No. 97-160

**REPLY COMMENTS OF BELL ATLANTIC¹ ON
III.C.2 PLATFORM**

It is clear from the comments of the proxy model sponsors that the models do not take into account all of the factors that affect the cost of outside plant. The Commission should not adopt the facile suggestion of the Hatfield model sponsors that the Commission should ignore cost considerations that the Hatfield model does not, or will not, incorporate. For example, the model does not recognize that climate affects the choice of aerial, buried, or underground plant, that difficult terrain causes additional installation costs, and that drop lengths vary depending on lot size and location of the residence.

¹ The Bell Atlantic telephone companies ("Bell Atlantic") are Bell Atlantic-Delaware, Inc.; Bell Atlantic-Maryland, Inc.; Bell Atlantic-New Jersey, Inc.; Bell Atlantic-Pennsylvania, Inc.; Bell Atlantic-Virginia, Inc.; Bell Atlantic-Washington, DC, Inc.; Bell Atlantic-West Virginia, Inc.; New York Telephone Company; and New England Telephone and Telegraph Company.

A model that fails to include algorithms for these factors will not accurately identify high cost areas and the level of universal service support that should be made available.

The Commission should also reject the Hatfield model's reliance on outdated technologies that do not reflect forward-looking network design principles. This includes the model's excessive reliance on T-1 copper technology.

Respectfully submitted,

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III.C.2 Platform Design Components – Outside Plant Investment

a. Plant Mix (paras. 56, 58)

AT&T/MCI promise that the next version of the Hatfield Model will take terrain factors into account in selecting the mix of aerial, buried and underground plant.² However, it will do so by allowing the user to input a shift in the plant mix for “non-standard terrain conditions.” The model will not include an algorithm to determine how and when a given terrain feature would be considered non-standard, or how much the plant mix should change for a given terrain condition. For this reason, the model would require manual inputs for each geographic area, which would require actual engineering cost studies for each area.

AT&T/MCI also promise that the next release of the Hatfield model will take into account “lifetime” costs of both the initial installation and ongoing maintenance and other costs in selecting the plant mix.³ To properly calculate lifetime costs, the model would have to incorporate separate maintenance cost factors for each type of plant. This is the methodology used by Bell Atlantic in developing actual forward-looking cost studies.

AT&T/MCI do not dispute the fact that climatic conditions would affect an efficient carrier’s decision whether to deploy aerial plant.⁴ Rather, they contend that it

² *See* Comments of AT&T Corp. and MCI Telecommunications Corporation (“AT&T/MCI”) at pp. 3-4.

³ *See id.* at pp. 3-4.

⁴ *See id.* at pp. 4-5.

would be “impossibly complex” to include the various types of climatic conditions that affect the plant mix decision in a proxy model, and that it is not clear whether it can do so accurately.⁵ That admission underscores the deficiencies of proxy models in determining universal service support levels. A model that fails to take into account real-world conditions that affect the cost of installing and maintaining plant will fail to identify accurately high cost areas.

Given these considerations, any proxy model should rely on the local exchange carriers’ actual plant mix in each area rather than a proxy model algorithm to determine the plant mix. This is the most accurate way of taking into account factors such as terrain, density, zoning conditions, environmental hazards, and esthetic considerations, that control the decision whether to deploy aerial, buried, or underground plant in a given area or route.

b. Installation and Cable Costs (paras. 60-62, 65-67)

AT&T/MCI recognize that the Hatfield Model does not provide for additional expenses caused by difficult terrain, and they state that the user may input different installation costs to take into account terrain factors not included in the model.⁶

⁵ The BCPM also does not take climate into account in the plant mix. The sponsors only include climate as a factor in the level of installation and maintenance costs in each area. *See* Joint Comments of BellSouth Corporation, BellSouth Telecommunications, Inc., US West, Inc., and Sprint Local Telephone Companies (“Joint Sponsors”) at p. 11.

⁶ *See* AT&T/MCI at pp. 5-6. The BCPM includes algorithms for additional costs for difficult terrain conditions. *See FNPRM* at para. 66.

However, the lack of an algorithm based on terrain inputs again would require manual adjustments based on cost studies for each area. As GTE points out, the only way to ensure that all of the additional costs of difficult terrain and varied types of cable are taken into account is to use actual costs incurred by the local carrier, as identified in a carrier-specific engineering model.⁷

c. Drops (paras. 70-71, 74)

AT&T/MCI admit that their model does not take into account drop lengths, or anything else that affects the costs of drop wire to a home, and that it simply assumes an average drop length for each density zone.⁸ They argue that no exact computation of drop length is necessary. However, as Bell Atlantic and others demonstrated, the costs of drops vary considerably depending upon the size of the lot, the placement of the house, the presence of obstructions, and conditions in urban areas.⁹ The Hatfield model incorrectly assumes that drop costs vary only with the density of lines in a given area. The BCPM at least uses lot size to vary the length of drops. Again, it would be more accurate for the Commission to use carrier-specific engineering studies to determine drop costs in each area, rather than the simplistic assumptions of a proxy model.

⁷ See GTE at p. 5.

⁸ See AT&T/MCI at pp. 8-10.

⁹ See Bell Atlantic Attachment at pp. 6-7; GTE at pp. 5-6.

d. Structure Sharing (paras. 76-79).

AT&T/MCI are incorrect in arguing that the LECs can share buried plant.¹⁰ As the Commission observed, it is impractical to share installation costs when cable is plowed in.¹¹ Also, as Bell Atlantic and others demonstrated, there is no reason to assume that the LECs will have a greater incentive or ability to share structure with other utilities in the future.¹²

e. Loop Design

(1) Fiber-Copper Cross-over Point (paras. 84-87)

The Hatfield model sponsors continue to advocate excessive copper loop lengths based on their assumption that a carrier would use T-1 technology to extend copper distribution beyond 18,000 feet.¹³ However, to reach these distances, they assume use of repeaters that would introduce additional trouble points and that would not be used by a new carrier building capacity with today's technology.¹⁴ It is also not consistent with consideration of both first cost and ongoing maintenance costs. The Hatfield model's excessive reliance on copper infrastructure is inconsistent with forward-looking cost principles.

¹⁰ See AT&T/MCI at pp. 13-14.

¹¹ See FNPRM at para. 80.

¹² See, e.g., Bell Atlantic Attachment at p. 9; Joint Sponsors at pp. 15-16.

¹³ See AT&T/MCI at p. 18.

¹⁴ See GTE at pp. 9-10.

(3) Digital Loop Carrier (paras. 90-91, 93)

Most commenters agree that the Commission should not adopt a model that assumes only two sizes of digital loop carrier ("DLC").¹⁵ The Joint Sponsors clarified that the current BCPM is not limited to two sizes of DLC, and they stated that the enhanced BCPM will allow additional size options.¹⁶ AT&T/MCI state that the Hatfield model includes eight sizes of DLC.¹⁷

f. Wireless Threshold (paras. 95-102)

The commenters disagreed about whether wireless technologies should be included in a proxy model, and whether the model should set a cost threshold above which wireless technology should be assumed.¹⁸ The Commission should not adopt an arbitrary cap on wireline costs based on an assumption that some sort of wireless technology would be less expensive. The Commission should adopt a cross-over based on data concerning the actual per-line cost of providing wireless service in a given density zone.

¹⁵ See, e.g., GTE at pp. 12-13; Ameritech at p. 13.

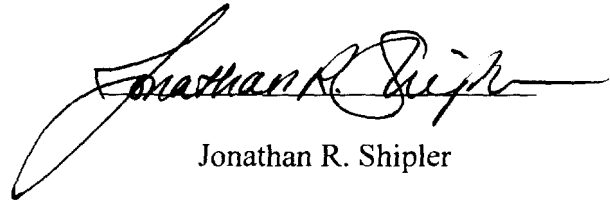
¹⁶ See Joint Sponsors at p. 17.

¹⁷ See AT&T/MCI at p. 19.

¹⁸ See Nortel at pp. 4-6; AirTouch at pp. 3-15; TDS at pp. 12-14; GTE at pp. 14-15; Joint Sponsors at pp. 18-19; AT&T/MCI at pp. 19-20.

CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of October, 1997, a copy of the foregoing "Reply Comments of Bell Atlantic on III.C.2 Platform" was served by first class U.S. mail, postage prepaid, on the parties listed on the attached service list.

A handwritten signature in black ink, appearing to read "Jonathan R. Shipler", with a long horizontal flourish extending to the right.

Jonathan R. Shipler

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